Sturtevant

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Puts Air to Work

BULLETIN 427

Classics
AT
3254
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1937

THIS BOOKLET briefly describes the major applications of Sturtevant Air Handling and Conditioning Equipment. Various other uses of our equipment could be shown but in general they would immediately be recognized as derivations of such standard applications as:

Cooling . . . Heating . . . Moistening . . . Cleaning . . . Conveying . . . Drying . . . Ventilating . . . Conditioning . . . Exhausting . . . All of which are covered in the following pages, and prove the slogan—*Sturtevant Puts Air to Work.*

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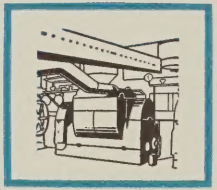
AIR CONDITIONING



The pioneer complete year round air comfort conditioning system was engineered by Sturtevant in 1910. Since then, Sturtevant or its subsidiary, The Cooling and Air Conditioning Corp., has designed and supervised the installation of systems for almost every class of industrial manufacturing susceptible to weather variations as well as for a variety of commercial and government buildings.

Catalogs No. 398 and AC 101 show commercial and industrial Sturtevant Air Conditioning installations.

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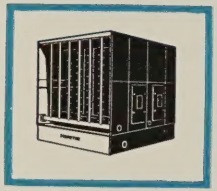
AIR WASHING



Equipment for this application has a very wide use in both commercial buildings and industrial plants. The washer not only cleans and purifies but also conditions the air within certain limits.

Air washers are easily adapted to central heating and ventilating systems and will be found in most commercial buildings where such systems are used.

Catalog No. 295 describes the various types of Sturtevant Air Washers and their applications.

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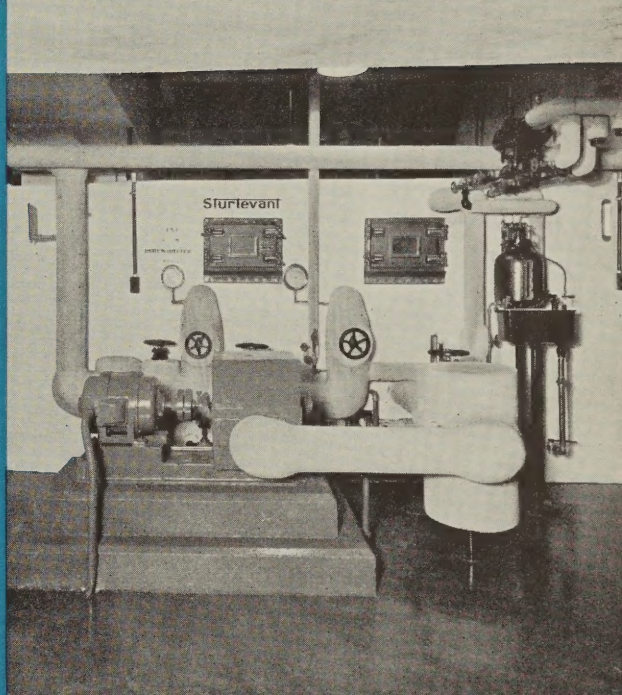

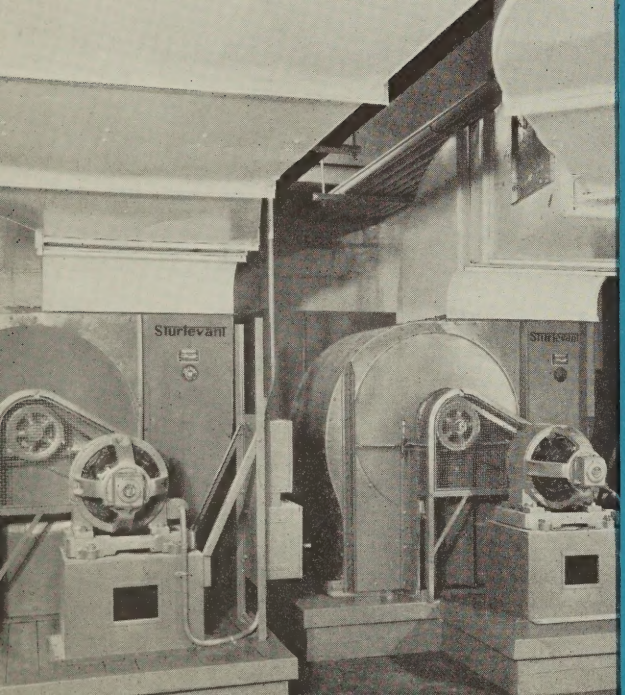

VENTILATING SYSTEMS

The heart of any ventilating system is its supply and exhaust fans. Sturtevant has three distinctly different types to meet the requirements of any system. These are the Multivane, Silentvane, and Rexvane, each having its own particular characteristics.

These fans are described in individual catalogs, the Multivane in Catalog No. 271, the Silentvane in Catalog No. 381, and the Rexvane in Catalog No. 414.

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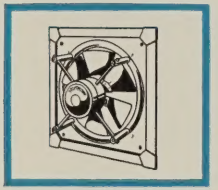
ROOM VENTILATION



Sturtevant's complete line of propeller fans, ranging in sizes from 10″ to 45″ diameter, will solve any individual room ventilating problem — residential, industrial or commercial.

There are also small size centrifugal fans for exhausting air or fumes through ducts. These are usually required for range or laboratory hoods and inside rooms, such as toilets and vaults, not having direct outlets to the outdoors.

All of these fans are described in Catalog No. 400.

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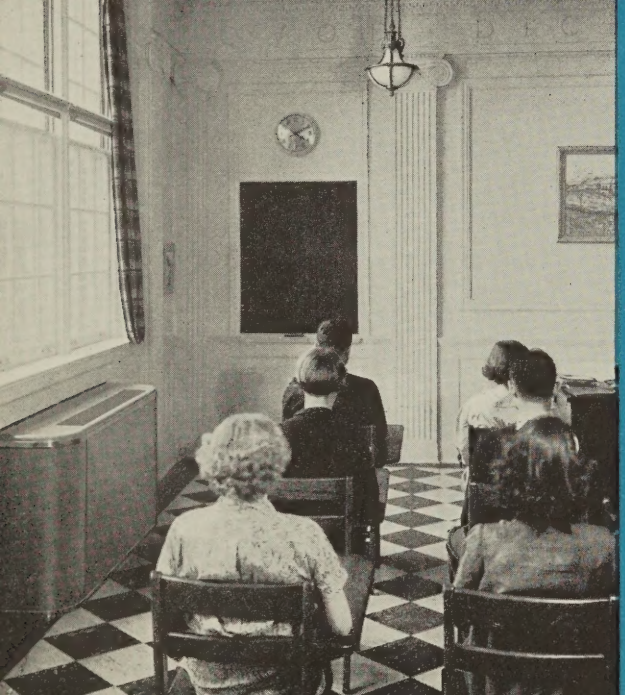
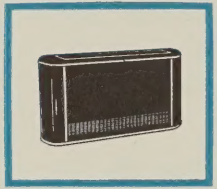


UNIT VENTILATION



Although Unit Ventilators are commonly classed as schoolroom heating and ventilating units, they are highly recommended for commercial applications in offices, showrooms, and similar areas.

The advantage of these units lies in their function of maintaining a practically even temperature and keeping a supply of fresh, tempered air constantly flowing into the room.

All the features and benefits of Unit Ventilation are described in Catalog No. 377.

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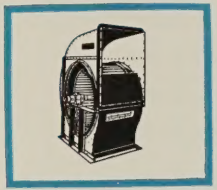
HEATING SYSTEMS



Central Heating Systems depend largely upon the fans and heating surface; the fans to quietly and efficiently distribute the heated air throughout the system; the heating surface to transmit the greatest volume of heat.

For such applications, Sturtevant Multivane, Silentvane or Rexvane Fans, and Extended Surface Heating Sections can be used effectively. If some method of air cleaning is desired, Sturtevant Air Washers are available in a variety of sizes and capacities to meet any requirement.

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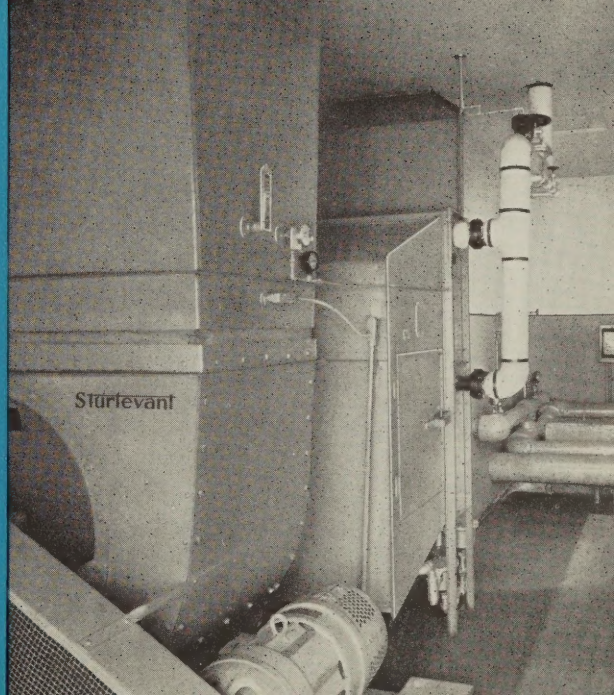
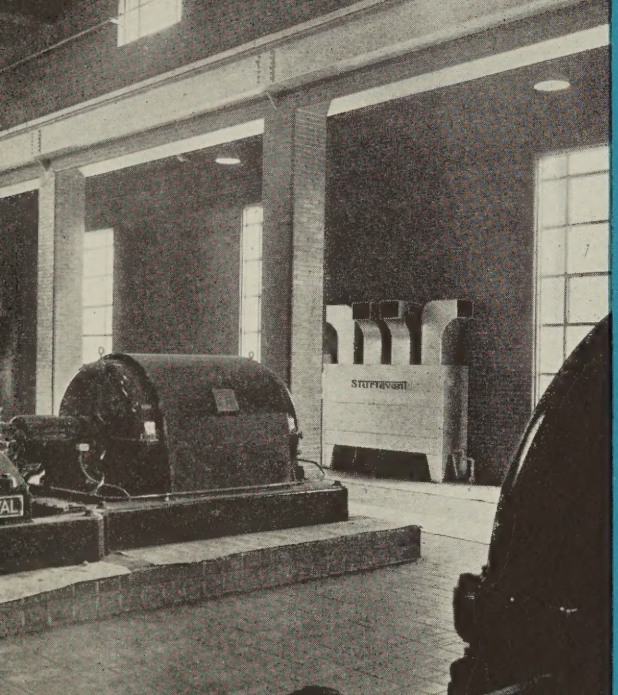
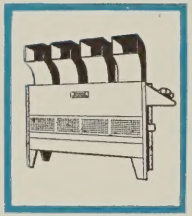




UNIT HEATING



During the last decade, the unit system of heating has made tremendous advances. This is due primarily to the increased heating efficiency, closer control of temperature and greater flexibility obtained with units.

Rexvane Heaters are heavy duty floor type heaters, having large heating capacities. They are used mainly in industrial plants where high ceilings and large areas ordinarily tax the facilities of other heating systems.

A complete description of Rexvane Heaters is given in Catalog No. 395.

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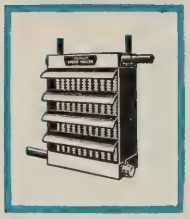
UNIT HEATING



Another popular type of unit heater is the Speed Heater. Usually considered for industrial applications, their general use for commercial heating is steadily increasing, being used in warehouses, garages, shops, stores, laundries, and numerous other areas.

Speed Heaters are installed suspended from the ceiling, beams, or trusses where they take up no valuable floor space. Complete data will be found in Catalog No. 396.

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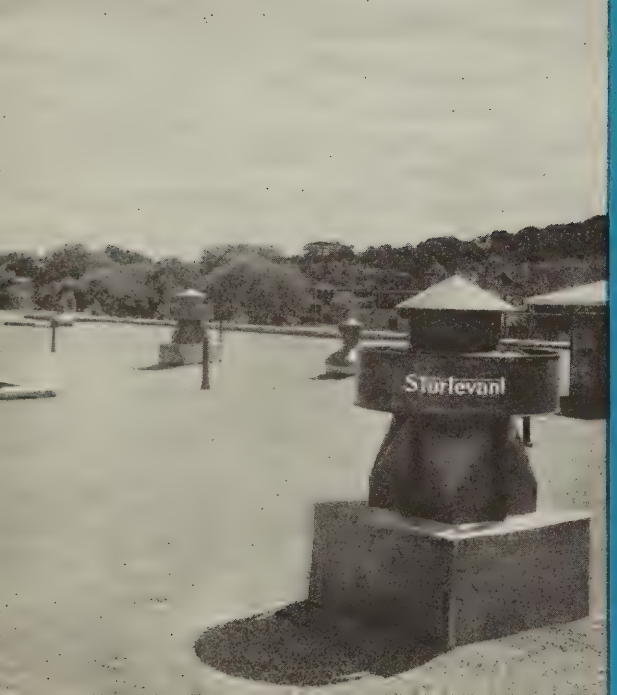
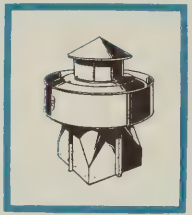


POWER ROOF VENTILATORS



Here is another type of ventilating fan, known as the Roofvane Ventilator. Installed on the roof, it can be used to exhaust directly from the area below or connected to a duct system to ventilate rooms at a remote distance.

The fan wheel is suspended directly below the motor, yet the motor is not in the air stream and therefore not affected by the air being handled. The design of the housing protects all parts from the elements.

Catalog No. 422 describes this fan.

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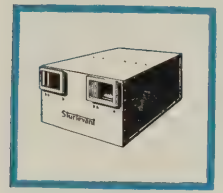
RAILWAY AIR CONDITIONING



This is another field in which Sturtevant has pioneered, a field in which our equipment, either as complete units or integral parts, is to be found in thousands of air conditioned cars.

Railvane Air Conditioning Units have been designed to meet any requirement demanded in this service. Equipment is being used in cars of many different railroads, much of it with air distributing systems designed in our own laboratory to meet prevailing conditions.

Catalog No. 401 describes this equipment.

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IN 1860

Starting in a small one-room "shop", with a patented idea and four or five men, Mr. Benjamin Franklin Sturtevant in 1860 laid the foundation for a business which still carries his name and is known the world over. Little could he have thought in those early days that he was also laying the foundation for an industry which today ranks very near the top in Industrial America.

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IN 1937

Today we find the 11 acres of crowded floor space at the main works in Hyde Park inadequate to carry on what Mr. Sturtevant started in such meagre quarters nearly 4 score years ago. Additional acres of floor space are being utilized in branch plants located at Framingham, Mass.; Camden, N. J.; Sturtevant, Wis.; Berkeley, Calif.; and Galt, Ontario.

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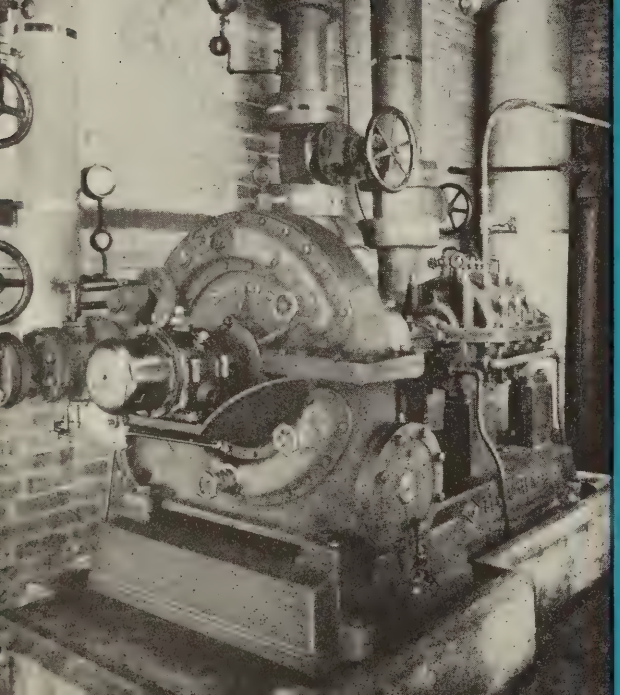
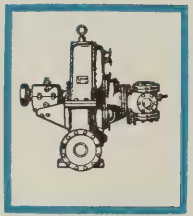


TURBINES



Turbines are very popular as driving units on fans, pumps, generators, pulverizers, and stokers, especially where exhaust steam can be utilized. Their operation is both economical and dependable.

Sturtevant Turbines are available in a wide range of designs and sizes, adequate to meet any requirement. For many years they have been used in industrial, commercial and marine service. During this period, thousands of units have been built for naval service, meeting the rigid specifications and tests of the Navy Department.

Catalog No. 426 describes these units.

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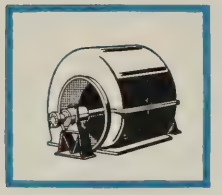
MECHANICAL DRAFT



The many changes made during the last decade in power plant design and operation has been reflected in the design and construction of mechanical draft equipment.

Today's requirements demand equipment to withstand high speeds, high pressures, high temperatures and frequent load changes, demands which must be met with safe construction and economical operation.

Proof of the sound engineering of Sturtevant Forced and Induced Draft Fans is found in their installations in the country's leading power plants.

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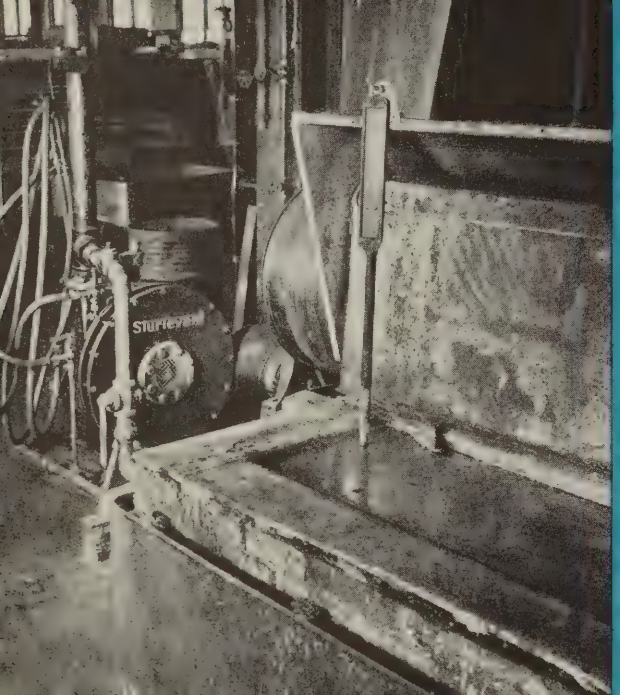
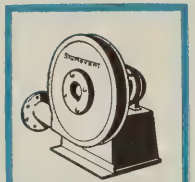


FURNACE AIR SUPPLY



Industrial furnaces, solution tanks, and other similar equipment, whether gas or oil fired, require a steady and dependable air supply to the burner.

The characteristics of the Sturtevant Design 9 Centrifugal Compressor—wide range in air volumes at a practically constant pressure—make this equipment specially suited to this work.

Catalog No. 386 provides further details on this equipment.

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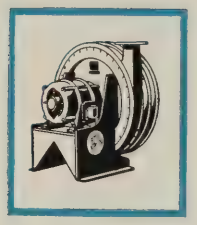
GAS BOOSTERS



Booster service in gas plants requires units which will maintain practically constant pressures over a wide range in volume and give uninterrupted service.

For many years Sturtevant Multistage Centrifugal Compressors have been meeting these requirements in numbers of gas plants throughout the country. Their quiet and efficient operation reflect sound engineering and their sturdy construction insures continuous operation under the severe conditions encountered.

Catalog No. 420 describes this equipment.

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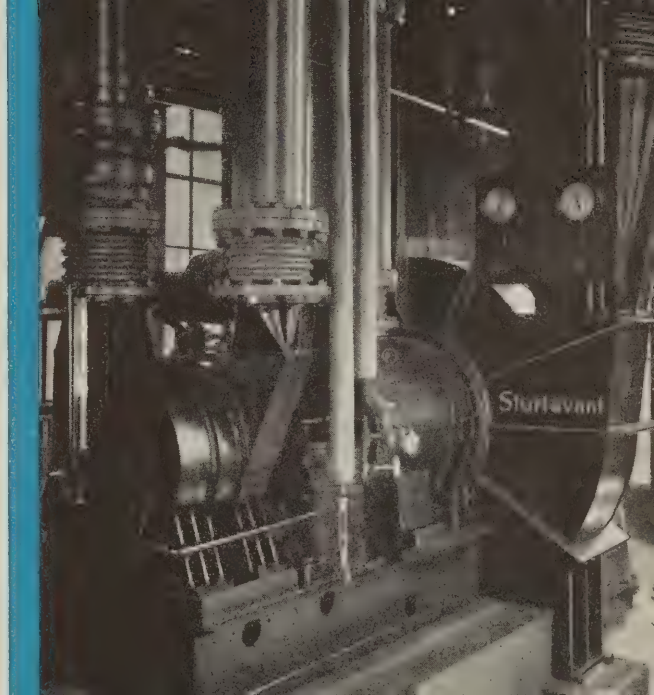

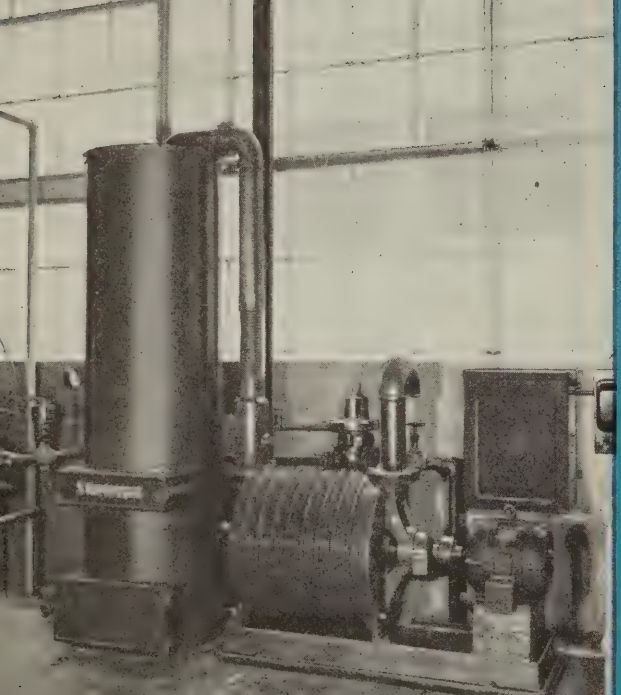

VACUUM CLEANING

Vacuum cleaning is recognized as the most satisfactory method of cleaning commercial buildings and industrial plants. With a central system, large areas are kept clean with the least expenditure of time and effort and operators can be working at different points simultaneously.

Sturtevant has designed systems for both commercial building cleaning and industrial plant cleaning. Catalog No. 368 describes industrial systems while Catalog No. 397 describes commercial systems.

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VACUUM CLEANING

For the smaller industrial and commercial cleaning requirements, portable vacuum cleaners are used with excellent results. This equipment consists of a complete mobile unit which can be moved easily from one location to another.

Sturtevant Portable Vacuum Cleaners are available in five sizes. These range from the smallest which is designed for light cleaning work to the largest which is suitable for practically any heavy duty cleaning work.

Catalog No. 413 describes all five units in detail.

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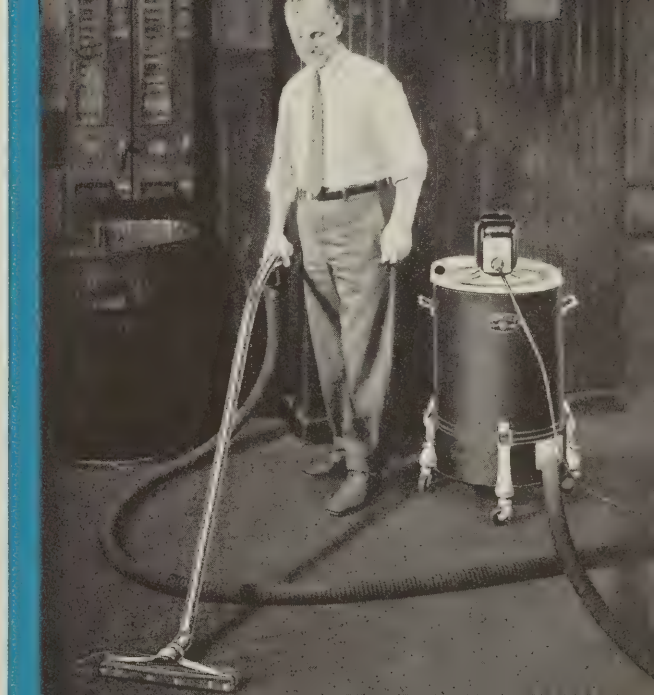
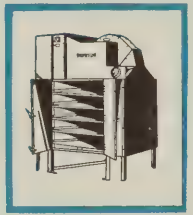


INDUSTRIAL DRYING



Industrial Drying, as it applies to both industries and products, is very diversified. For this reason the successful performance of drying equipment depends largely upon the designer's knowledge of air engineering.

Sturtevant engineers have designed units and systems for drying a wide variety of products and materials. Their thorough understanding of drying problems, knowledge and application of air engineering, and years of experience in drying work make Sturtevant the logical source for this equipment.

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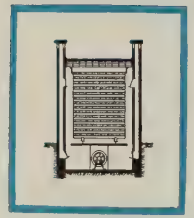
LUMBER DRYING



Air-drying of lumber has always been considered ideal but this method is too slow to meet today's requirements.

Sturtevant Plate Type Dry Kilns, with their cross circulation feature, practically duplicate nature's best drying results in a fraction of the time. Results: smaller stocks are carried; yard degrade is eliminated; drying schedules are planned to meet requirements. Lumber is dried to the desired moisture content without fear of checking or case hardening.

Catalog No. 369 describes these kilns.

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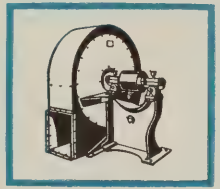
PNEUMATIC CONVEYING



Collecting and conveying materials in an air stream is another air engineering problem. That is probably why Sturtevant systems have been so widely used.

Sturtevant Pneumatic Collecting and Conveying equipment and systems are used for handling shavings, sawdust, emery dust, cotton, wool, rubber scrap and numerous other materials.

The extent to which this equipment is used is shown in Catalog No. 291.

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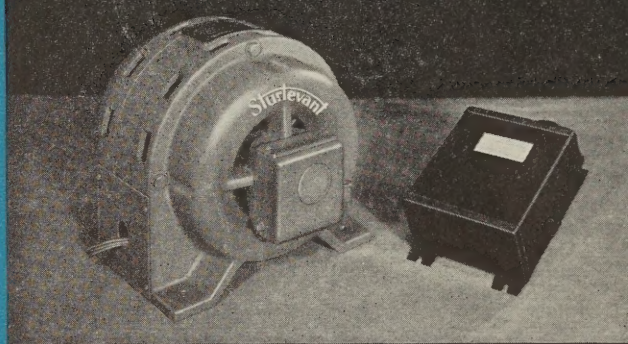
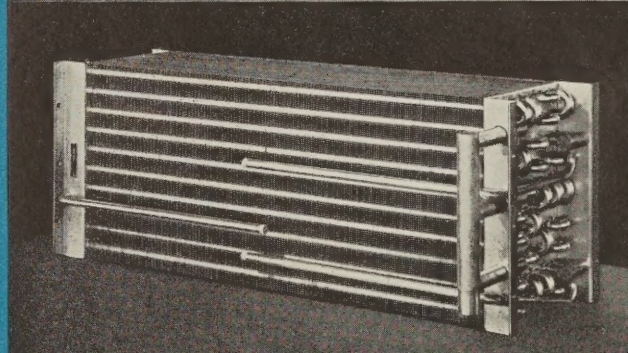
MOTORS

Sturtevant motors have been developed under the exacting conditions usually incident to fan practice. They are designed and built for heavy duty operation and are available in integral or fractional horsepower ratings.

HEAT TRANSFER SURFACE

Sturtevant Heating and Cooling Coils of the extended surface type are available in a wide range of types and sizes for a variety of heating and cooling applications. Each type has been carefully developed to meet the application for which it is required.





B. F. STURTEVANT COMPANY

Main Office and Works: Hyde Park, Boston, Mass.

Plants Located in

Hyde Park, Mass. Framingham, Mass. Berkeley, Calif. Camden, N. J. Galt, Ontario Sturtevant, Wis.

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COOLING and AIR CONDITIONING CORPORATION

Division of B. F. Sturtevant Co.

Main Office: Hyde Park, Boston, Mass.

Atlanta, Ga. Camden, N. J. Chicago, Ill. Greensboro, N. C. New York, N. Y. Los Angeles, Calif.

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Galt, Ontario